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Cloning and the Constitution, Cloning and the Constitution, Cloning and the Constitution, Cloning and...

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INTRODUCTION

In form and fashion, in proposition and purpose, the breadth and depth of human culture ever demonstrates a remarkable diversity. The sundry peoples of the earth differ, not only in their appearance, clothing, and diet, but no less in their social systems, religious beliefs, and political philosophies. Yet whether king or commoner, aristocrat or pauper, notorious or anonymous, each human being shares with every other, one fundamental condition of life, as indeed human beings have throughout their history on

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earth. Each man, and each woman traces his or her origin to a mystifying, microscopic biological event: the fusion of male and female gametes that describes the process of sexual reproduction. Moreover, this nascent physiological occurrence is universally precipitated by, and generally subservient to, a greater, inexorable "carnal" desire of a man and woman, each for the other. It is a desire that oft constitutes not only a corporeal passion, but no less an emotional (some might say a spiritual) yearning that draws the two together for that ecstatic union of the sexes by which new human souls are conceived. Yet the aggregate result of recent scientific advances in physics, chemistry, biology, genetics, and medicine, has led humankind to the astonishing discovery that reproduction in animals, non-human in fact, and human in theory, may also be achieved asexually through a laboratory procedure known as cloning.[1] Scientists have already successfully cloned animals, including frogs,[2] salamanders,[3] mice,[4] sheep,[5] cows,[6] and monkeys.[7] Many scholars and scientists working in related fields of biochemistry believe that it is just a matter of time before humankind acquires the knowledge needed to similarly procreate, or more precisely, *replicate* human beings.[8] Indeed, in January 2001, a Kentucky infertility specialist informed the world he is forming a consortium, intending, he announced, to produce the first human clone.[9] Remarkably, many scientists firmly believe that human beings have already been cloned clandestinely.[10]

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1. Suggesting the horticultural origin of the term, the word "clone" is derived from the Greek word "klon," which means "twig." OXFORD ENGLISH DICTIONARY 342 (2d ed. 1989).

2. Nat'l Bioethics Advisory Comm'n, *Cloning Human Beings: Report and Recommendations of the National Bioethics Advisory Commission*, Vol. 2, B-5 (1997) [hereinafter *Cloning Human Beings*].

3. *What is a Clone?, at* http://www2.worldbook.com/features/cloning/html/what_is.html.

4. Leon Eisenberg, *Would Cloned Human Beings Really Be Like Sheep?* 340 NEW ENG. J. MED. 6, (Feb. 11 1999).

5. *Id.*

6. Gina Kolata, *Japanese Scientists Clone a Cow, Making Eight Copies*, N.Y. TIMES, Dec. 9, 1998, at A8.

7. Nancy Gibbs, *Baby, It's You! and You, and You...*, TIME, Feb. 19, 2001, at 2, *available at* http://www.time.com/time/magazine/printout/0,8816,98940.html; Tim Beardsley, *A Clone in Sheep's Clothing*, SCI. AM. *available at* http://www.sciam.com/explorations/0303-97clone/030397beards.html (last visited Mar. 3, 1997).

8. Gibbs, *supra* note 7, at 2.

9. *Id.* at 1.

10. Brian Alexander, *Human Cloning Has Always Been Frightening, Seductive-and Completely Out of Reach. Not Anymore, available at* http://www.wired.com/wired/archive/

Cloning, even at the most rudimentary level, holds out the extraordinary promise for curing otherwise incurable diseases,[11] perfecting the transplantation of life saving organs,[12] eradicating defective lines of genes,[13] forestalling the process of aging,[14] as well as for what may be the most sophisticated use of cloning envisioned: a form of human reproduction that will one day incorporate all these achievements to produce a radically different, ostensibly superior form of human being.[15] On the other hand, the prospect of human cloning holds out equally grave dangers: for the sacrilegious abuse of human embryos and fetuses,[16] the mutation of human beings into monstrous, transgenic forms,[17] gratuitous stillborn births and malformed

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9.02/projectx_pr.html. (last visited Nov. 1, 2001); (reporting repeated assertions, such as "[m]any animal cloners and *in vitro* fertilization experts are certain that a human has already been cloned in secret."). *Id.* Gibbs, *supra* note 7, at 1 (reporting the claim of a South Korean company that claims to have successfully created, and then destroyed a cloned human embryo); Kristen Philipkoski, *All The World's a Stage of DNA*, WIRED, Feb. 10, 2001 (interview with James Watson who won the Nobel Prize with Francis Crick and Maurice Wilkins in 1962 for their work in identifying the structure of the DNA molecule).

These assertions, proceeding from among the most respected scientists in the world, demonstrate the fallible judgment of even the finest scientific minds. For the present knowledge of cloning suggests that it would take literally hundreds of attempts to successfully produce a cloned human being. *See, e.g., infra* note 54. Thus, it is a doubtful proposition at best that, based upon the current, relatively superficial knowledge of non-human mammalian cloning, a renegade scientist or even organization, would have sufficient time and resources to secretly succeed in the enterprise to clone a human being. If the assertions about the difficulty of cloning are true, one would need the immediate accessibility of hundreds of women willing to subject themselves to the physical, if not emotional, trauma of carrying embryonic clones to serve the cause of science. Even supposing that a scientist, or laboratory, found a few women willing to undergo repeated implantations, at this writing, in May 2001, it is only five years since the announced successful cloning of a sheep, a period so short that it renders conclusions that a human being has already been cloned to be suspect at best.

11. J. Madelaine Nash, *The Case For Cloning,* Time.com, http://time.com/time/magazine/1998/dom/980209/science.the case_for_clo26.html.

12. *Cloning Human Beings, supra* note 2, at 30; John A. Robertson, *Human Cloning and the Challenge of Regulation*, 339 NEW ENG. J. MED. 119, (July 9, 1998).

13. Nash, *supra* note 11 (quoting Princeton University molecular biologist Lee Silver).

14. Jerome P. Kassirer & Nadia A. Rosenthal, *Should Human Cloning Research Be Off Limits?*, 338 NEW ENG. J. MED. 905 (Mar. 26, 1998).

15. Ronald Bailey, *Petri Dish Politics, at* http://reason.com/9912/fe.rb.petri.html. (last visited Dec. 1999).

16. Kassirer, *supra* note 14.

17. Human Cloning Foundation, *The First Cloned Human Embryo,* http://www.humancloning.org/firsthumanclone.html (describing a report from Advanced Cell

infants,[18] the promotion of some socially favored racial characteristics over others,[19] and the cruel infliction of needless suffering on experimental subjects, human and nonhuman alike.[20] As a result of the potential for both good and evil in cloning, advocates and opponents of the technology continue to compete with one another to define the ancillary issues, and in particular, they seek to do so through the assignment of legality or illegality to the propositions they respectively favor.

Part I of this paper constitutes a brief primer on the subject of human reproductive cloning. Section A consists of a discussion of the actual and anticipated benefits of cloning, while section B discusses the fears, myths, and the prospective dangers of the process. Part II evaluates cloning in the light of constitutional law and principles. Section A of Part II reviews the present legal status of cloning in the United States. Section B analyzes cloning as it relates to reproductive freedom and the right to privacy. Section C examines how anti-cloning legislation might violate the principles of Equal Protection, while section D discusses cloning and freedom of speech.

I. BASIC FACTS ABOUT HUMAN REPRODUCTIVE CLONING

A. *Reproduction, Sexual and Asexual*

Scientists tell us that each human being consists of literally trillions of cells.[21] Each of these cells, though undetectable to the human eye, constitutes an entire world unto itself, an unimagined and unimaginable intricacy of activity that takes place in every moment, in every place where human cells thrive. Perhaps even more intriguing, almost every human cell contains the complete "genetic code" of an individual.[22] The genetic code may be understood as a storehouse of sorts, a place in which all the information concerning a person's physical composition and hereditary potential are maintained on a submicroscopic level. Through this genetic prodigiousness, whereby a person's full genetic code exists in almost every

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Technologies describing the successful cloning of a human embryo by inserting human DNA into a cow's egg).

18. Scott F. Gilbert, *Human Cloning (Correspondence)*, 339 NEW ENG. J. MED. 21, (Nov. 19, 1998).

19. Kassirer, *supra* note 14.

20. *Cloning Human Beings*, *supra* note 2, at 4.

21. BOYCE RENSBERGER, INSTANT BIOLOGY 59 (Fawcett Columbine 1996).

22. Bailey, *supra* note 15, at 7–8.

one of his or her trillions of cells, it is, at least theoretically, possible to transform each one of those cells into a complete human being.[23]

Though a human being consists of an incomprehensibly prolific number of cells,[24] that singularly fantastic integration and complexity originates from a single cell, the ovum or egg, produced by the female of the species.[25] By fusion with a male gamete, and subsequent progressive cell division and growth, an embryo forms that will eventually evolve into a fully-formed fetus.[26] However, just before the male and female gametes unite, each possesses only twenty-three chromosomes, incomplete by half of the number needed to create a human being.[27] Once united, a new cell is created possessing the full forty-six chromosomes required for human life.[28] These forty-six chromosomes consist of segments of DNA molecules, known as genes, which carry and transmit the traits and attributes of each of the two parents.[29] It is this process, at once mundane and miraculous, that is commonly referred to as *sexual* reproduction.

Cloning, in contrast, is a form of asexual reproduction. That is to say, it requires neither a coupling of the sexes, nor the union of male and female gametes. In the prospective process of human reproduction wrought through cloning,[30] the entire forty-six chromosomes of a prospective parent or donor are transplanted into a female's enucleated egg. The resulting embryo is then implanted in the womb of the actual or surrogate mother where it can gestate. As with *in vitro* fertilization, it is only the initial microscopic event of conception that occurs in a laboratory, outside of the female's uterus. Scientists have already successfully performed this procedure with several species of mammals.[31] The offspring of the process constitutes not a physically or biologically novel form of life, but a precise physical or genetic duplicate, a "delayed identical twin" of the parent.[32]

In fact, cloning already takes place both in nature and in human culture. Plants reproduce through a form of cloning scientists refer to as "vegetative

23. *Id.*
24. RENSBERGER, *supra* note 21.
25. *Embryology*, Compton's Interactive Encyclopedia (Softkey Multimedia Inc. 1996).
26. *Id.*
27. *Id.*
28. *Id.*
29. *Id.*
30. Robertson, *supra* note 12.
31. Scientists have succeeded in cloning mice, sheep, calves, and monkeys. *See supra* notes 5–8.
32. *Cloning Human Beings*, *supra* note 2.

propagation."[33] In horticulture, cuttings of a single plant are cultivated to propagate desired botanical characteristics.[34] It is through cloning that farmers cut and graft their crops, favoring the traits of some plants over the traits of others.[35] Cloning also occurs naturally in higher animals, as when identical twins are born.[36] Undertaken in the province of the scientific laboratory, cloning has resulted in such achievements as the artificial production of insulin,[37] and the growth of vital cultures.[38]

In sexual reproduction, a new form of life constitutes a convergence of the genetic identity of each parent. It is for this reason that a child carries physical traits of both parents, not only in the genotypes such as hair, eye, and skin color, but also in recessive traits that may later appear in the child's offspring. In asexual reproduction, however, the new form of life is, in most cases, genetically *identical*, that is, an exact duplicate of the parent.[39]

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33. *What Is a Clone?*, *supra* note 3.
34. Eisenberg, *supra* note 4.
35. *What Is a Clone?*, *supra* note 3, at 2.
36. *Id.*
37. *Cloning Human Beings*, *supra* note 2.
38. *What Is a Clone?*, *supra* note 3.
39. In what seems the most fundamental contradiction of reason and experience, many express fears that a clone will constitute not only a genetic duplicate, but also a spiritual or behavioral replication of the source of the cloned cell. That is to say, many people have expressed fears that a clone will duplicate a cloning parent's evil personality, moral disposition, or political purpose, which expressions conjure up dystopic images of the conspiratorial cloning of armies of murderous dictators and criminals.

An appeal to simplest reason and reflection however, suggests that the determinant of a human being's personality (alternately referred to as the "mind," "soul," "self," "psyche," and "spirit") is not essentially, and certainly not exclusively, biological. Rather, it is shaped passively by the uterine environment during the term of gestation, and actively from the first moments of a person's birth by his or her surrounding domestic and social environments.

In sum, the determinable biochemical causality of the brain's formation does not necessarily imply a similar rudimentary, mechanical causality of the ideas and purposes forged by that mystery called the "mind," even if the mind finds its corporeal foundation and physical correspondence in the brain. Men and women may find a natural appeal in the simplicity of the notion that all human beings may be reduced to a summation of microscopic, biochemical events. However, that simplicity is no more entitled to endorsement than the similar but mistaken appeal men and women found in past centuries in the notion that the planets must, of necessity, travel in perfect spheres, and not as they actually do, in inelegant ellipses, or in the notion that the earth must be flat. (For after all, how could it be round? How would it stay suspended in space? If the earth wasn't flat, wouldn't we all fall off the surface?)

Genetically identical twins raised in different cultures may possess some similarities, perhaps even striking similarities. However, the differences in the languages they speak, their dialects, interests, religious beliefs, and avocations are directly traceable to their

B. *The Anticipated Benefits of Human Reproductive Cloning*

Successful development of human reproductive cloning technology holds out visionary promise for the treatment and cure of otherwise untreatable and incurable diseases.[40] Indeed, it is now conceivable that certain genetic diseases may one day be eradicated from the face of the earth. For example, if both partners in a marriage carry the gene for Tay-Sachs disease, through cloning they might be able, not only to conceive a child free of *the disease*, they may be able to create that child free *of the gene itself*, so it would never be suffered by future generations.[41] By creating an embryo from a cloned cell, scientists could supplant the flawed gene with a healthy one.[42]

Perhaps equally remarkable with the prospect of conquering dread diseases, cloning technology offers the possibility of an entirely novel, unimagined, and heretofore unimaginable form of human reproduction. Cloning may provide a new means of reproduction for couples, or even individuals, who otherwise find themselves unable to procreate children.[43] Thus, in the cases in which a couple is unable to conceive a child because of gametic failure,[44] cloning technology may enable them to produce a child that is biologically related to one, and perhaps both parents.[45] For example, if the man is the infertile partner, by cloning his DNA into his wife's enucleated egg, the DNA implant might be understood as an imperfect, genetically dominant substitute of sorts for the male gamete. Through this process, a child will be conceived that carries the traits of both parents. Both the process and the result of this form of cloning closely resemble existing treatments for reproductive dysfunction—*in vitro* fertilization and artificial insemination. In contrast, where the woman is the infertile partner, cloning could produce a child by implanting the woman's DNA within a donor egg, but the child would not carry any of the biological traits of her husband. In

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respective environments, that is, to the home, family, friends, and society, as well as some independent form of internal psychological engagement that describes the process of reflection, introspection, creation, and the application of one's reason from a uniquely relative perspective.

40. Nash, *supra* note 11.

41. *Id.*

42. *Id.*

43. Robertson, *supra* note 12.

44. Gametic failure takes place when a woman cannot produce eggs or a man cannot produce sperm necessary to produce healthy offspring.

45. John A. Robertson, *Two Models of Human Cloning*, 27 HOFSTRA L. REV. 609, 638 (1999).

addition, where a person carries flawed recessive genes, such as those that transmit Tay-Sachs disease, sickle cell anemia, or cystic fibrosis,[46] the asexual reproduction of cloning would provide a couple with the otherwise unavailable security of producing a physically healthy and genetically sound child.

C. *Actual Fears and Prospective Dangers of Human Reproductive Cloning*

As great as the anticipated benefits of cloning are, the fears and dangers are perhaps greater. Within weeks of the Roslin Institute's publication of the paper describing the successful cloning of a sheep,[47] members of Congress began drafting anti-cloning legislation. In addition, some countries in Europe declared human cloning to be illegal.[48] Highly respected professional organizations within the scientific and medical communities, as well as more than two dozen recipients of Nobel prizes in science, agreed "there should be a moratorium on the creation of a human being through cloning."[49] So serious are the fears and dangers inspired by the technology, that in 1997, President Clinton's National Bioethics Advisory Commission concluded, unequivocally, that human cloning should not be attempted.[50] The Commission also expressed multiple concerns about the physical safety, the autonomy, the kinship, and possible objectification of the resulting children.[51] Moreover, in the years since the announcement of the cloning of the first sheep, members of Congress have repeatedly held hearings and proposed bills expressly drafted in order to prohibit cloning.[52]

As naturally occurs with the introduction of new ideas with the potential to transform human self understanding and the order of society, the discussion of cloning in the public arena has been accompanied by grave and

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46. John A. Robertson, *Why Human Reproductive Cloning Should Not in All Cases Be Prohibited*, 4 N.Y.U. J. LEGIS. & PUB. POL'Y 35, 38 (2000–01).

47. Tim Beardsley, *A Clone in Sheep's Clothing*, SCI. AM., *available at* http://www.sciam.com/explorations/030397clone/030397beards.html (last visited Mar. 3, 1997

48. Robert S. Schwartz, *Book Review*, 339 NEW ENG. J. MED. 2 (July 9, 1998).

49. George J. Annas, *Why We Should Ban Human Cloning*, 339 NEW ENG. J. MED. 2 (July 9, 1998).

50. *Cloning Human Beings*, *supra* note 2.

51. *Id.*

52. *Should Cloning Be Banned? at* http://www.reason.com/biclone.html. (last updated Oct. 2001); Reuters, *Scientists Warn Against Cloning Human Beings*, (Mar. 26, 2001), *available at* http://ing.philly.com/content/inquirer/2001/03/26/national/clone26/htm.

often highly imaginative fears.[53] However, although some concerns may be freely dismissed as unfounded, cloning does indeed present genuine dangers

53. A human clone is misunderstood in the popular imagination as an exact copy of a person, physically, behaviorally, and morally. For popular books of fiction in which cloning is featured as a central theme, *See* IRA LEVIN, THE BOYS FROM BRAZIL, (Dell Pub. Co., 1976); KATHLEEN ANN GOONAN, THE BONES OF TIME, (Harper Collins, 1996); JOHN CHASE, THE GENESIS CODE, (Brilliance Corp. 1997); KEN FOLLETT, THE THIRD TWIN (Ballentine Books, 1997). Popular films that treat the subject of cloning include THE BOYS FROM BRAZIL (Artisan Entertainment 1978), JURASSIC PARK (Universal Pictures 1993), INVASION OF THE BODY SNATCHERS (Walter Wanger Pictures, Inc. 1956), and MULTIPLICITY (Columbia/Tristar 1996).

However, although a clone will indeed, in all cases, constitute an exact genetic duplicate of the parent cell, and possess a very strong (but not necessarily identical) physical resemblance, a clone will *not* constitute an exact, or even necessarily, an essential behavioral or moral copy. The natural occurrence of identical twins in society provides an ideal form of proof of this fact. Though identical twins are genetically indistinguishable, both common experience and scientific studies demonstrate that, salient similarities notwithstanding, each twin is endowed with his or her own unique personality. *See, e.g.*, NANCY L. SEGAL, PH.D., ENTWINED LIVES (1999). Not only do twins differ in the whorls of their respective fingerprints, studies of twins raised apart indicate their performance on intelligence quotient tests varies as much with environment as with genetic constitution. *Id.* In other words, genes may provide the raw material for a person's intelligence, emotion, and purpose, but each person's necessarily different and distinct environment gives that material its unique form. The scientific ability to trace the causality of, and so, produce otherwise naturally occurring pigments in paint does not by any means imply the ability to similarly trace the causality of, and so, produce infinitely higher works of creative virtuosity produced with those paints, such as those produced by Rembrandt or Van Gogh.

Three factors insure that a clone will differ in fundamental ways from his or her parent:

1) The primary material from which a cloned human being is formed, the DNA from the somatic cell, must be supplemented by the contrasting mitochondrial DNA of the enucleated egg in which it is placed. Alexander, *supra* note 10, at 12 (quoting Infigen's Michael Bishop). The convergence of two different forms of DNA will result in necessary differences in the newly conceived child from its parent.

2) While the debate over whether nature or nurture determines human behavior may serve an invaluable heuristic purpose, it is a self-evident fact that the domestic and social environments within which a child develops shape his or her psyche in the most fundamental ways. Moreover, it is not only these extrinsic environments that determine a person's language, dialect, interests, beliefs, and aptitudes; the necessarily unique uterine environment in which a child gestates, as well as the home in which child development takes place, have been shown to play a key role in determining a child's biochemical, and so, neurological development. *Id.* Thus, though a cloned child will possess the precise hereditary information of a parent cell, because the child gestates in a particular womb at a necessarily unique time in the surrogate or actual mother's life, and because it is further introduced to the experiences of life through a unique social place and historical time, a child's personality, in all instances will take an independent, differentiated form.

with which men and women must reckon if they are able to exploit the technology at last for the public weal. All human invention, from the artificial production of fire, to the generation of power through nuclear fission, may be used for good or for evil; cloning, of course, is no different.

Expressly conceding the great inefficiency of current cloning technology, the chief executive of the company that introduced the first cloned sheep to the world advised that "it would take more than 400 eggs and 50 surrogate mothers to produce a cloned baby."[54] He noted that cloning the first sheep required "277 reconstructed eggs, of which 29 developed into normal embryos placed in 13 sheep, and that only one embryo resulted in success."[55] "Such a high failure rate will mean numerous malformed and stillborn infants will be produced."[56] Thus, the genuine dangers to the health and the life of the fetus, as well as to the welfare of prospective mothers, whether natural or surrogate, must be properly addressed before the cloning of human beings may be reasonably advanced.

Another concern is that "cloning is a harbinger of the genetic alteration and control of human characteristics in offspring."[57] Indeed, cloning is closely related to "transgenic modification," the ability to modify the genes of a cell in order to predetermine the physical, and perhaps, behavioral characteristics of the prospective offspring.[58] The notion of the progressive genetic modification of a human being over generations suggests a change in human self understanding perhaps as revolutionary as the Copernican explanation of the heliocentric order of the solar system,[59] and the Darwinian proposition that man came into being not by a spontaneous act of Divine

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3) A clone will differ fundamentally from his or her *parent* as a necessary consequence of the indeterminable causality of gene activity. A person's chromosomes contain at least thirty-thousand genes. Philipkoski, *supra* note 10. Only some of the genes are expressed; that is, only some of them unfold into actual characteristics of a person. Whether or not a particular gene is expressed is a result of an ultimately indeterminable, sometimes random, extraordinarily complex activity among different genes, and between genes and the environment. Mark D. Eibert, *Cloning: Myths, Medical Benefits, and Constitutional Rights* (Sept. 23, 1999), *available at* http://www.humancloning.org/users/infertil/humancloning.html.

54. Robertson, *supra* note 12, at 43 n.1.

55. *Id.*

56. Gilbert, *supra* note 18.

57. Robertson, *supra* note 46, at 36.

58. *Id.* at 39. Scientists have already successfully altered the genes of laboratory animals, creating models of human disease within mice. Kassirer, *supra* note 14. This "transgenic modification" of mice allows scientists to study the role of genes in normal development and disease. *Id.*

59. NICOLAUS COPERNICUS, ON THE REVOLUTION OF THE CELESTIAL SPHERES (1543).

Will, but by a process of natural selection that transpired over the course of millenia.[60] The social, legal, and moral implications of humankind's prospective self-transformation through cloning and genetic manipulation are so overwhelming as to be inassimilable. Thus, many discern in cloning the potential "to tamper with the 'moral and social' sense of what it means to be a human being."[61]

It is also feared that the acceptance of asexual human reproduction will harm society by eliminating reproduction in its sexual form as an essential characteristic of human life, disrupting the traditional and conventional classification of human society by generations, and confusing parent-child relationships.[62] Indeed, one wonders whether the source of a cloned child's DNA should be properly described as the child's parent, or as the child's twin.[63] In addition, fears have been expressed that, with the acceptance of asexual reproduction of human beings, the diversity of the human gene pool will be diminished.[64]

Indeed, it would seem that cloning, in conjunction with similarly revolutionary advances in genetics and biochemistry, has brought society one step closer to realization of the formerly fictional notion of eugenics, the highly controversial science that supposes to improve the human race through controlling inherited characteristics.[65] Among the first attempts in the field of eugenics was undertaken by National Socialist Germany which, in paying tribute to the ideology of a glorified Aryan race, engaged in ineffably cruel and horrific experimentation on human subjects, and sterilized those considered racially undesirable or inferior.[66] It is also most disturbing to learn that a eugenics movement existed in the United States,

60. CHARLES DARWIN, ON THE ORIGIN OF THE SPECIES BY MEANS OF NATURAL SELECTION (1859).

61. Robertson, *supra* note 12, at 43 n.4, (quoting E.J. Dionne Jr.); *see also* E.J. Dionne Jr., *Hold Off on Cloning*, WASH. POST, Jan. 13, 1998, at A15.

62. George J. Annas, *Human Cloning (Correspondence)*, 339 NEW ENG. J. MED. 21 (Nov. 19, 1998).

63. "[The donor of a cloned cell] is not the child's 'parent' in any biological sense, but simply an earlier offspring of the original parents." George J. Annas, *Why We Should Ban Human Cloning*, 339 NEW ENG. J. MED. 2 (July 9, 1998).

64. Andrea Wang, *Regulating Human Cloning Within an Environmental Human Rights Framework*, 12 COLO. J. INT'L ENVTL L. & POL'Y 165 (2001).

65. OXFORD ESSENTIAL DICTIONARY AMERICAN EDITION 342–43 (2d ed. 1998).

66. Mary Z. Pelias & Nathan J. Markward, *The Human Genome Project and Public Perception: Truth and Consequences*, 49 EMORY L.J. 837, 843 (2000); *see also* ROBERT J. LIFTON, THE NAZI DOCTORS: MEDICAL KILLING AND THE PSYCHOLOGY OF GENOCIDE (Basic Books, Inc. 1986); ARTHUR I. CAPLAN, WHEN MEDICINE WENT MAD: BIOETHICS AND THE HOLOCAUST (Humana Press 1992).

one that came into existence long before the National Socialists came to power in Germany.[67] The theoretical potential of cloning and transgenic modification, and the historical record left by the governmental programs of Germany and the United States, demonstrate that the acute fears expressed by both scientists and laypersons are not properly dismissed as unfounded or fanciful.

Other somewhat less menacing, but nevertheless disturbing fears give cause for concern. Some worry that the wealthy and powerful may use cloning to replicate themselves,[68] or that entrepreneurs might seek to market the DNA of a celebrated athlete, model, artist, or entertainer.[69] In an alternate scenario, a person might seek to appropriate the DNA of a third party without that party's consent,[70] and use the stolen genetic material to produce a clone.[71]

The prospective capacity to reproduce human beings asexually through cellular vestiges that survive a person's death has inspired some rather confused and troubling ideals. In what is a startling, recurrent theme among those who advocate human cloning, the technology is endorsed for its apparent ability to resurrect a living replica of a dying or deceased child.[72] In such instances, some people, it seems confuse the possibility of genetic replication with hopes of spiritual resurrection. In what seems a sadly misguided ideal, the surviving parents seek to create a new child, apparently to perpetuate the myth that their deceased child lives again. One may speculate that such parents misunderstand a clone as somehow constituting a reincarnation of their deceased child, or perhaps they seek to indulge the

67. Pelias, *supra* note 66, at 843; Mark D. Eibert, *Cloning: Myths, Medical Benefits, and Constitutional Rights*, Sept. 23, 1999, *at* http://www.humancloning.org/users/infertil/ human-cloning.html (observing that thirty-six states in the United States passed eugenics based sterilization laws in the early part of the twentieth century. California sterilized more than 30,000 of its citizens).

68. Robertson, *supra* note 12, at 119.

69. *Id.*

70. *Cloning Human Beings*, *supra* note 2.

71. *Id.* The commission of such an act, it seems, might give new meaning to the tort of conversion, and raises the question of whether a person can claim legally protected possessory rights in his or her DNA. *See, e.g.*, Kojo Yelpaala, *Owning the Secret of Life: Biotechnology and Property Rights Revisited*, 32 MCGEORGE L. REV. 111 (2000).

72. *See, e.g.*, Gibbs, *supra* note 7, at 6 (noting that the Clonaid project operated by the UFO Raelian sect, advertised its plans to clone a ten month old deceased infant; parents of six-year-old child who died in a tragic fall seek to clone the child, though they could procreate another child, and other children, through natural means of procreation); Alexander, *supra* note 10, at 3, 10; Annas, *supra* note 62, at 3; John A. Robertson, *Liberty, Identity, and Human Cloning*, 76 TEX. L. REV. 1371, 1381 (1998); Thomas H. Murray, *Even If It Worked, Cloning Wouldn't Bring Her Back*, WASH. POST, Apr. 8, 2001, at B1.

whim or vanity of creating another child with an appearance identical, or nearly identical, to the first. In fact, it is difficult to imagine a proposition that more greatly diminishes the sanctity of the memory of a deceased child than the confused supposition to blithely replace the child with a surrogate physical replica. Such a notion would seem to constitute a denial, indeed, annihilation of the unique place the late child held in time, and in the hearts, of those by whom he or she was loved. Moreover, because of the inherent danger in producing a human clone, it seems a profound irony that "in trying to make a copy of a child who has died tragically, one of the most likely outcomes is another dead child."[73]

Cloning has also produced fears concerning the psychological welfare of children born from the asexual process of reproduction. Questions have been raised whether such children will suffer psychological harm because of a "diminished sense of individuality and personal autonomy."[74] The National Bioethics Advisory Commission has expressed the fear that a child borne of cloning might be "severely harmed" by the knowledge that he or she possesses identical DNA to the source of his birth.[75]

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73. Gibbs, *supra* note 7, at 4.

74. *Cloning Human Beings*, *supra* note 2. If the sanctity of a human being is in his or her uniqueness, and men and women value what is distinctive, then it is reasonable to conclude that they will disregard, or diminish the worth, of that which is common. Thus, the less unique a person, the more he or she is likely to know a diminished sense of worth in the world, in the eyes of others, and consequently, in his or her own eyes.

75. *Id.* However, it might be reasonably argued in response that a child's primary development, whether mental, emotional, or spiritual, will be complete by the time he or she is able to understand and assimilate the relatively abstract and subtle concepts of asexual biological origin. Such initiation, it is reasonable to suppose, would affect the child no more traumatically than does news learned by a child that he or she was adopted, rather than biologically conceived, by his mother and father. While such news potentially might confuse, or even disturb a person, it is hardly an event that, as some maintain, would properly bring into question whether he or she should have been born.

According to one observer, "the central problem of cloning [is] the devaluing of persons by depriving them of their uniqueness." Annas, *supra* note 62, at 122. "The only reason to clone an existing human," Dr. Annas suggests, "is to create a genetic replica." *Id.* at 123 (It should be noted however that although *in vitro* fertilization and artificial insemination provide the means for procreation to many otherwise infertile couples, these processes do not work universally). *See* Alexander, *supra* note 10. Neither *in vitro* fertilization, nor artificial insemination, can help those couples in which one of the partners suffers from a condition of gametic failure that is perfect. (For couples seeking to sire a child that is biologically related to at least one of the parents, and for whom the notions of extra marital donors of eggs or sperm, like adoption, are unacceptable, cloning may indeed fulfill a need that cannot be dismissed as merely capricious, vain, or gratuitous). "The danger is that through human cloning, we will lose something vital to our humanity, the uniqueness (and therefore the value

According to the National Bioethics Advisory Commission ("NBAC"), the most real and immediate danger in the attempt to clone a human being would be to the fetus.[76] Indeed, the NBAC observed, "at present, the use of this technique to create a child would be a premature experiment that would expose the fetus and the developing child to unacceptable risks."[77] The identification of this prospective danger by the Commission back in 1997, has been supported by subsequent cloning research on animals. In March, 2001, scientists conceded that clones are often borne with "serious developmental problems," such as heart and lung defects and defective immune systems.[78] In recent months, mice produced by cloning technology suffered what seems to be a spontaneous metabolic transformation.[79] From a condition of apparent normalcy, the mice developed conditions of obesity in what seems to be random genetic errors that can emerge at any time in a cloned animal's life.[80] Moreover, only two to three percent of efforts to clone mice, and only one percent of efforts to clone a cow succeed in producing live offspring.[81] According to another source, "ninety-eight percent of embryos never implant, or die off during gestation or soon after birth."[82] If the embryos do not die in fetal development, they may die shortly after birth; if they survive, they often suffer major developmental defects.[83]

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and dignity) of every human." Annas, *supra* note 62, at 123. On the other hand, if the underlying premise of Dr. Annas' argument is true, that is, that human beings naturally cherish the novelty, creativity, and distinction that defines a condition of uniqueness in the world, and conversely, consider dispensable that which is redundant, common, and prosaic, then the argument refutes the underlying premise it supposes to advance—any interest in producing a society of clones characterized by a staggering redundancy fails to accord with human nature as we know it. *Id.*

76. *Cloning Human Beings*, *supra* note 2.

77. *Id.*

78. Reuters, *Scientists Warn Against Cloning Human Beings*, PHILA. INQUIRER, Mar. 26, 2001, at A4; Gibbs, *supra* note 7, at 2.

79. Gina Kolata, *Researchers Find Big Risk of Defect in Cloning Animals*, N.Y. TIMES (Mar. 25, 2001), *available at* http://www.nytimes.com/2001/03/025/science/25CLON.html.

80. *Id.*

81. *Id.*

82. Gibbs, *supra* note 7, at 4.

83. *Id.*

II. CLONING AND THE LAW: DO THE PRINCIPLES OF THE CONSTITUTION PROTECT OR PROSCRIBE REPRODUCTIVE CLONING?

A. *The Present Legal Status of Reproductive Cloning*

While fears, both justified and fanciful, have driven much of the opposition to the notion of asexual human reproduction, at present, only four of the fifty states have passed laws that prohibit human reproductive cloning.[84] California, Louisiana, Michigan, and Rhode Island have enacted laws that ban attempts to create a human being through asexual reproduction.[85] While the laws of three of the states threaten offenders with formidable financial and licensing penalties,[86] Michigan's anti-cloning statute is a criminal one, under which violators may be sentenced to ten years in prison.[87] Moreover, Michigan's criminalization of human cloning is enforceable against researchers, doctors, and their infertile patients.[88] Mindful of the rapid advances in science, however, both Rhode Island and California included "sunset" clauses in their legislation; so the respective laws automatically expire after several years if they are not extended.[89]

The federal government has prohibited the use of federal funds for embryo research since 1996.[90] Reinforcing this prohibition, President Clinton issued an Executive Order forbidding the use of federal funds for human cloning research.[91] However, although sundry anti-cloning bills have been proposed,[92] no accommodation could be reached between Republicans

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84. CAL. HEALTH AND SAFETY CODE § 24185 (West 2001); LA. REV. STAT. ANN. § 1299.36.2 (West 2001); MICH. COMP. LAWS ANN. § 333.16274 (West 2001); R.I. GEN. LAWS § 23-16.4-2 (1998). Missouri prohibits the use of state funds for cloning research. MO. ANN. STAT. § 1.217 (West 2000).

85. *Id.*

86. In Louisiana and Michigan, violators of the statute may be fined up to ten million dollars. LA. REV. STAT. ANN. § 1299.36.2 (West 2001); MICH. COMP. LAWS ANN. § 333.16274 (West 2001). In California and Rhode Island, an organization that violates the statute may be fined up to one million dollars. CAL. HEALTH AND SAFETY CODE § 24185 (West 2001); R.I. GEN. LAWS § 23-16.4-2 (1998).

87. MICH. COMP. LAWS ANN. § 750.430a (West 2000).

88. *Id.*

89. Unless extended, California's statute will expire on January 1, 2003, and Rhode Island's statute will expire on July 7, 2003. CAL. HEALTH AND SAFETY CODE § 24189 (West 2001); R.I. GEN. LAWS § 23-16.4-4 (1998).

90. Bailey, *supra* note 15, at 6.

91. *Cloning Human Beings*, *supra* note 2.

92. *See Should Cloning Be Banned? at* http://www.reason.com/biclone.html (last updated Oct. 2001).

who seek a comprehensive ban on human cloning, and Democrats who wish to protect those forms of nonhuman cloning research that are unrelated to human reproduction.[93] Biomedical researchers and interested patient groups have lobbied with intensity against anti-cloning legislation.[94] Because their interests lie in nonreproductive, and so, noncontroversial forms of cloning, the constituents of those lobbyists are concerned that a blanket ban will outlaw established commercial and scientific enterprises.[95] Thus, private research undertaken to clone human beings is legal in most of the United States. However, after controversial testimony before a House subcommittee in March of 2001, House members advised that they have acquired stronger conviction in favor of a national ban on human cloning.[96] Through a White House press secretary, President Bush announced that he supports the idea of anti-cloning legislation: "The president believes that no research—no research—to create a human being should take place in the United States."[97]

Strangely, the Food and Drug Administration (FDA), presumably because of its power to regulate the pharmaceutical industry, declared that human cloning is subject to its authority.[98] An official of the FDA stated that the agency can prohibit human cloning experiments based upon public safety concerns.[99] Violators, according to the FDA, could face fines up to $100,000.00, and be sentenced to up to a year in prison. However, despite these assertions, the FDA does not seem to have statutory jurisdiction over the practice of medicine or cloning,[100] and despite the agency's assertion of such authority,[101] even members of the House of Representatives have expressed doubts about the FDA's jurisdiction over cloning.[102]

93. Eibert, *supra* note 67; Gibbs, *supra* note 7. (The primary source of embryos for stem cell research is provided by *in vitro* fertilization clinics, whereas cloning of embryos, not to produce human beings but only to produce stem cells, would provide an almost infinite supply).

94. *See* Rick Weiss, *Scientists Testify on Human Cloning Plans; Some House Members Vow to Seek a Legislative Ban on Controversial Procedure*, WASH. POST, Mar. 29, 2001, at A10.

95. *Id.*

96. *Id.*

97. *Id.*

98. Letter from Stuart L. Nightingale, Associate Commissioner, Food & Drug Administration, to Colleague (Oct. 26, 1998); Eibert, *supra* note 67.

99. Lisa Richwine, *U.S. Lawmakers Criticize Human Cloning Efforts*, REUTERS Mar. 29, 2001, *available at* Compuserve Newsroom.

100. Weiss, *supra* note 94.

101. *Id.*

102. *Id.*

B. *Cloning, Reproductive Freedom, and the Right of Privacy*

The charter *political* document of the United States, the Declaration of Independence, proclaims that liberty stands premier among the inalienable rights of man. The charter *legal* document of the United States, the Constitution, seeks to ensure liberty through a separation of governmental powers,[103] and a Bill of Rights that enumerates the comprehensive and fundamental rights of the individual.[104] Despite the proclamation of the sanctity of freedom, and recurrent articulation of liberty's preeminence throughout the Bill of Rights, those very rights of freedom so fundamental to men and women, (tenuous perhaps by nature), have been ever under challenge since the Republic was founded. Thus, citizens of the United States have found themselves forced to resort to the judiciary to establish that the Constitution protects their rights to marry,[105] to have children,[106] to educate and raise their children,[107] to marital privacy,[108] to acquire and use contraception,[109] to bodily integrity,[110] and the right of a woman to choose to have an abortion.[111] These and other decisions relating to the family and procreation form a constellation of sorts, establishing a right of privacy that, though formally not enumerated, finds its authority in the Constitution; indeed, these Supreme Court decisions confirm that the Constitution upholds an inherent right to privacy, most particularly where matters of the family and procreation are concerned. The Court has also observed that the Constitution protects "personal decisions relating to marriage, procreation, contraception, family relationships, child rearing, and education," having stated unequivocally that such freedom concerns "the most intimate and personal choices a person may make in a lifetime."[112] The right of privacy precludes governmental interference with an individual's decision on matters of his or her body.[113] Moreover, in *Eisenstadt v. Baird*,[114] the Court stated,

103. U.S. CONST. art. I–III.

104. U.S. CONST. amend. I–X.

105. Loving v. Virginia, 388 U.S. 1, 12 (1967).

106. Skinner v. Oklahoma, 316 U.S. 535 (1942).

107. Meyer v. Nebraska, 262 U.S. 390 (1923); Pierce v. Soc'y of Sisters, 268 U.S. 511 (1925).

108. Griswold v. Connecticut, 381 U.S. 479 (1965).

109. Eisenstadt v. Baird, 405 U.S. 438 (1972).

110. Rochin v. California, 342 U.S. 165 (1952).

111. Planned Parenthood v. Casey, 505 U.S. 833, 851 (1992).

112. *Id.*

113. Roe v. Wade, 410 U.S. 113 (1973).

114 405 U.S. at 453.

"if the right of privacy means anything, it is the right of the individual, married or single, to be free from unwarranted governmental intrusion into matters so fundamentally affecting a person as the decision whether to bear or beget a child."[115] In addition, in more than one opinion, the United States Supreme Court has expressly identified a constitutionally protected right to reproduce, also referred to as "reproductive freedom."[116]

Some states assign even greater importance to the right of privacy; the Florida Constitution, for example, enumerates an express right to privacy.[117] This provision states, "[e]very natural person has the right to be left alone and free from governmental intrusion into the person's life. . . ."[118] Thus, a person in Florida has a right to be free from governmental intrusion into areas where he or she can demonstrate a reasonable expectation of privacy.[119]

Considering then the strength of the federal and state recognition of the right of privacy, particularly as it relates to reproductive matters, one might suppose then that the right of a person to procreate through cloning cannot be gainsaid. Closer analysis requires the more cautious conclusion that the answer depends upon how the question is cast. If the question of human cloning is defined as a matter of reproductive freedom, the governmental proscription of human cloning will violate citizens' "fundamental liberty to have and rear healthy, biologically related children."[120] Human cloning is, according to this point of view, sufficiently similar to other means of reproduction, whether natural, or artificial by *in vitro* fertilization and artificial insemination, to be classifiable as conduct protected by the principle of reproductive liberty.[121] It is also worth noting that while *in vitro* fertilization is thoroughly legal and, some might say, now even conventional, it was illegal in many states a mere twenty years ago.[122]

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115. *Id.*

116. *See* Washington v. Glucksberg, 521 U.S. 702 (1997); Planned Parenthood v. Casey, 510 U.S. 1309 (1994); Planned Parenthood v. Casey, 505 U.S. 833 (1992) (confirming the right to reproductive freedom as guaranteed by the Due Process Clause); Rust v. Sullivan, 500 U.S. 173 (1991).

117. FLA. CONST. art. I, § 23.

118. *Id.*

119. Fla. Bd. Bar Exam'rs Re: Applicant, 443 So. 2d 71 (Fla. 1983).

120. John A. Robertson, *Human Cloning*, 339 NEW ENG. J. MED. 21 (Nov. 19, 1998). *See also* John A. Robertson, *Liberty, Identity, and Human Cloning*, 76 TEX. L. REV. 1371–456 (1998).

121. Robertson, *supra* note 12.

122. Gibbs, *supra* note 7; Eibert, *supra* note 53, at 13.

In diametric opposition to such a view, however, it may be argued with equal vigor that a person's right to clone him or herself is *not* a fundamental right entitled to constitutional protection. Based upon the principle that citizens universally enjoy a right to what the courts call "substantive due process," the state cannot violate a citizen's "fundamental rights" without a compelling, narrowly-tailored interest.[123] Fundamental rights, in turn, have been juridically defined as those "deeply rooted in this Nation's history and tradition"[124] and "necessary to an Anglo-American regime of ordered liberty."[125] Because there is no tradition of asexual replication in the United States, and permitting asexual replication is not necessary to safeguard any existing concept of ordered liberty, staunch opponents of the technology argue conversely that there is no constitutional right to be cloned in the United States.[126] Those who oppose human cloning have also drawn support from an unlikely source; Ian Wilmut, who cloned the first sheep, and so, is perhaps the scientist most associated in the public perception with cloning, has openly declared his opposition to attempts at asexual reproduction of human beings.[127] Moreover, there already exist limits on citizens' right to reproduce that are almost universally recognized: reflecting universal social mores, every state in the Union, if not every nation in the world, has adopted legislation criminalizing incestuous relations and marriages. Florida law, for example, prohibits a person from engaging in sexual relations, as well as marriage, with a parent, sibling, uncle, aunt, nephew, or niece.[128] Thus, the right to privacy, and reproductive freedom, like all other rights and freedoms, are not absolute.

Dr. Annas suggests cloning human beings is not only redundant, but that it is also gratuitous.[129] "Although it is possible to imagine some scenarios in which cloning could be used for the treatment of infertility, the use of cloning simply provides another choice for choice sake, *not out of necessity*."[130] Cloning, Annas states, is "a technique that can produce an indefinite number of genetic duplicates."[131] "It is the duplication," Annas

123. Roe v. Wade, 410 U.S. 113, 155 (1973).

124. Moore v. City of E. Cleveland, 431 U.S. 494, 503 (1977).

125. Duncan v. Louis. 391 U.S. 145, 149–50 n.14 (1968).

126. John A. Robertson, *Why We Should Ban Human Cloning*, 339 NEW ENG. J. MED. 21 (July 9, 1998).

127. Gibbs, *supra* note 7.

128. FLA. STAT. § 826.04 (2001).

129. Annas, *supra* note 62, at 3.

130. *Id.*

131. *Id.*

observes, "of an already existing person, who is replicated only and precisely to create a genetic duplicate (since this is all that cloning can do)."[132]

While the cloning of individual *cells* may serve as an invaluable resource for treating and curing disease, because human beings already possess the capacity to reproduce sexually, whether naturally, or in the case of gametic failure, through *in vitro* fertilization, artificial insemination, or in the alternate, adoption, some might posit that there is no genuinely meaningful purpose for cloning human beings, in what is an essentially uncreative, asexual form of human reproduction. However, it is important to note that the success rate of *in vitro* fertilization is under thirty percent,[133] and it is an expensive and onerous process as well.[134] Moreover, because the infertile condition of some couples is complete, neither *in vitro* fertilization, nor artificial insemination are options.[135]

Finally, some opponents of cloning advance the proposition that, while citizens may possess the constitutionally protected right to know freedom from governmental interference in matters that concern reproduction and procreation, child bearing itself is not a privilege, condition, or benefit to which citizens can suppose to claim entitlement at the government's expense. "[T]he government does not have the obligation to ensure that each citizen who wants a child has a child."[136] According to this argument, the right to reproductive freedom to which the Supreme Court has identified both expressly and implicitly in multiple decisions, protects only those who have the capacity to reproduce through the traditional method of sexual reproduction.[137]

C. *Cloning and Equal Protection*

The Fourteenth Amendment expressly, and the Fifth Amendment implicitly, provide each citizen with a constitutional right to a standard of legal protection that is equal to that known by all others.[138] Thus, the Constitution prohibits the government from invidious treatment of one

132. *Id.*

133. Eibert, *supra* note 53, at 3; Alexander, *supra* note 10, at 6.

134. Alexander, *supra* note 10, at 10.

135. Robertson, *supra* note 46, at 37.

136. Sophia Kolehmainen, *Human Cloning: Brave New Mistake*, 27 HOFSTRA L. REV. 557, 565 (1999).

137. *Id.*

138. U.S. CONST. amend. XIV, V.

person, or class of persons *similarly situated* to others.[139] In addition, if a law violates a citizen's right that the Supreme Court has identified as *fundamental*, that law may violate the principle of equal protection.[140] The Supreme Court has already ruled that the freedom to procreate constitutes a fundamental right.[141] Thus, if scientists attain the ability to clone human beings, any proposed governmental prohibitions against human cloning may have to withstand the legal test of strict scrutiny, the judicial standard by which the constitutionality of alleged violations of fundamental rights are measured.[142] If a law infringes upon the rights of a so-called *suspect* class, one defined by race or national origin, the law must be necessarily related to a compelling governmental interest.[143] If the law infringes the rights of an intermediate class, defined by gender or children borne out of wedlock, the law must be substantially related to an important state interest.[144] Laws that infringe upon the rights of almost all other classes need only be rationally related to a legitimate governmental interest in order to be upheld.[145]

Laws that prohibit reproductive cloning of humans, considered in light of current case law, would thus only need to be rationally related to a legitimate state interest. Even if the purpose of the law is considered legitimate, the means to achieve that aim must be reasonable.[146] If the ban on cloning is a total one, the law would be significantly underinclusive, inasmuch as it would not similarly prohibit artificial forms of reproduction, such as *in vitro* fertilization, that share similar dangers to public safety and

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139. *See* City v. Cleburne Living Ctr. Inc., 473 U.S. 432, 439 (1985); Plyler v. Doe, 457 U.S. 202, 216 (1982); F.S. Royster Guano Co. v. Virginia, 253 U.S. 412, 415 (1920) (For state and local governmental laws). *See* Bolling v. Sharpe, 347 U.S. 497 (1954) (For federal governmental laws).

140. *See* Boddie v. Connecticut, 401 U.S. 371 (1971) (access to courts); Shapiro v. Thompson, 394 U.S. 618, 627 (1969) (interstate travel); Harper v. Virginia Bd. Elections, 383 U.S. 663, 665 (1966) (voting).

141. Skinner v. Oklahoma, 316 U.S. 535 (1942). *See also*, Bragdon v. Abbot 524 U.S. 624, 637–38 (1998) (ruling that, under the American with Disabilities Act, the inability to reproduce and bear children constitutes an impairment of a major life activity, classifiable as a disability).

142. *Skinner*, 316 U.S. at 541.

143. Korematsu v. U.S., 323 U.S. 214, 216 (1944).

144. Craig v. Boren, 429 U.S. 190, 197 (1976); Clark v. Jeter, 486 U.S. 456, 461 (1988).

145. Pennell v. City of San Jose, 485 U.S. 1, 14 (1988); Hodel v. Indiana, 452 U.S. 314, 331 (1981).

146. McLaughlin v. Florida, 379 U.S. 184, 191 (1964).

health.[147] But even if underinclusive as well as overinclusive, the Supreme Court would not find sufficient reason to strike down the law if it is shown to be both rational and legitimate.[148] Only if opponents of the law could demonstrate that the underlying purpose of the ostensibly legitimate state interest is insidiously biased or prejudicial, would the Court strike the law down as unconstitutional.[149] Thus, a law that prohibits human cloning, denying infertile couples access to technology that might otherwise provide them with the freedom to procreate that is naturally known by others, and even if indisputably constituting a form of discrimination, still might not violate equal protection under the law. For if the state can demonstrate a rational relationship of the law (e.g., prohibition against reproductive cloning) to a legitimate state interest (e.g., protecting the health of unborn children and prospective mothers,) and no bias is established, the discriminatory law will still be upheld by the courts.

D. *Cloning and the Freedom of Speech*

At first blush, it would seem that the subject of cloning, would have no relationship to First Amendment speech issues. For the first amendment of the United States Constitution prohibits the state from violating citizens' sacrosanct right to speak freely,[150] while cloning concerns the seemingly unrelated spheres of science, technology, and human reproduction. Yet other forms of human activity, not otherwise identifiable as *speech*, have in fact been so classified, thereby acquiring the First Amendment shield of invulnerability against governmental prohibition or intrusion.[151] Indeed, it is

147. Elizabeth Price Foley, *The Constitutional Implications of Human Cloning*, 42 ARIZ. L. REV. 647, 707 (2000).

148. *Id.*

149. Romer v. Evans, 517 U.S. 620, 636 (1996); Allegheny Pittsburgh Coal Co. v. County Coal Comm'n, 488 U.S. 336, 343 (1989); City v. Cleburne Living Ctr. Inc., 473 U.S. 432, 450 (1985).

150. U.S. CONST. amend. I.

151. Among the forms of human expression the Supreme Court has classified as "speech," and so protected by the First Amendment include commercial advertising, expressive conduct, and symbolic speech. *See* Texas v. Johnson, 491 U.S. 397 (1989) (flag burning as a form of protest against governmental policies); Tinker v. Des Moines Sch. Dist. 393 U.S. 503 (1969) (wearing of black armbands as a form of civil protest); Spence v. Washington, 418 U.S. 405 (1974) (upside down display of the American flag with an attached peace symbol); West Virginia State Bd. of Educ. v. Barnette, 319 U.S. 624 (1943) (flag saluting as a form of utterance); Miller v. California, 413 U.S. 15 (1973) (classifying pornography as a form of speech that should be protected unless classifiable as "obscene"

primarily those who engage in speech that are deemed to pose an unequivocal danger or destructiveness by way of immediate incitement,[152] conscious, willful calculation,[153] or deception[154] who can not look to the Constitution for protection.[155]

Some proponents of cloning who seek to advance the notion that scientific research should be endowed with immunity from governmental prohibition, argue such research constitutes an alternate, unrecognized form of human speech. Even the National Bioethics Advisory Commission, appointed by President Clinton, observed in its report on cloning, "If the First Amendment protects a marketplace of ideas, it seems likely [that] it would protect the generation of information that would be included in that marketplace."[156] On the other hand, the government is free to regulate

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according to a broad and complex legal definition); Pope v. Illinois, 481 U.S. 497 (1987) (extending the rule of Miller v. California, 413 U.S. 15 (1973)).

152. Chaplinsky v. New Hampshire, 315 U.S. 568 (1942) (fighting words); Cohen v. California, 403 U.S. 15 (1971) (fighting words that present "clear and present danger").

153. Brandenburg v. Ohio, 395 U.S. 444 (1969); Hess v. Indiana, 414 U.S. 105 (1973) (conspiracy and criminal anarchy); Gitlow v. New York, 268 U.S. 652 (1925) (holding that advocacy of criminal anarchy, a doctrine to overthrow the government using violence and assassinations by word of mouth, is not protected speech); N.Y. Times Co. v. Sullivan 376 U.S. 254 (1964) (discussing libel).

154. Central Hudson v. Public Serv. Comm., 447 U.S. 557 (1980) (ruling that the First Amendment does not protect commercial speech that is misleading).

155. *See* New York v. Ferber, 458 U.S. 747 (1982) (rejecting a First Amendment attack on a New York law prohibiting the distribution of child pornography.)

(Most of the cases cited in notes 149–53 concern speech as it is produced by, or effects individual citizens in their capacity as private and general members of society. Of course, the law also classifies, and restricts, the communication peculiar to society's many subcultures. For example, restrictions on speech, whether civil or criminal, are found in the realm of commerce in the prohibition against the revelation of trade secrets; in public broadcasting in proscriptions against "indecency;" amongst lawyers and judges on one hand, and doctors, hospitals, psychiatrists, psychologists, and social workers, on the other, in the confidentiality with which they are bound to hold client and patient records; in the courtroom, against lawyers from introducing evidence the court deems prejudicial; amongst journalists and newspapers, against publishing the names of rape victims and minors; against publishers as well as individuals from unauthorized copying of the creative works of others under copyright law; and against workers within governmental agencies, for speech disruptive to the agency's operation, or policy aims and objectives among others. These subcultural speech issues, as well as governmental regulation of the time and place of speech, irrespective of conduct, is beyond the scope of this discussion).

156. *Cloning Human Beings*, *supra* note 2, at F-6.

scientific research to protect and promote public health and safety.[157] As one scholar has observed, "there are ample precedents for such restrictions, as in the case of regulation of experiments with new drugs and with nuclear materials and facilities."[158]

One point of view suggests that scientific experimentation constitutes a form of expressive conduct, or symbolic expression, and so is entitled to First Amendment protection.[159] Scientific research, according to these observers, can be classified as a constitutionally sanctioned type of *symbolic speech*, comparable to students wearing black armbands or burning draft cards as an expression of protest.[160] According to this proposition, scientific research is a form of protected speech, no different in essence from the creative expression of ideas by playwrights or musicians.[161] Therefore, it is argued, research devoted to the end of cloning human beings is protected from governmental proscription by the First Amendment.

Such an argument, however, stretches the meaning of the word out of shape, causing it to collapse under the weight of the conduct wrongly assigned to it. Speech, in all the forms in which it has been deemed to be entitled to protection by the Constitution, concerns the conveyance of an idea or ideas, from a speaker to another listener or other listeners, whether those listeners are concurrently engaged, or merely prospective. All human speech, whether political, commercial, religious, social, or purely personal speech,[162] whether expressed verbally in words, pictorially in images, or symbolically in conduct, shares the quality of constituting a message of some

157. Henley v.Wise, 303 F. Supp. 62 (N.D. Ind. 1969); *see generally* Lori B. Andrews, *Is There a Right to Clone? Constitutional Challenges to Bans on Human Cloning*, 11 HARV. J.L. & TECH. 643 (1998) (providing an in depth analysis on the constitutional issues involved with cloning restrictions).

158. Harold P. Green, *Constitutional Implications of Federal Restrictions on Scientific Research and Communication*, 60 UMKC L. REV. 619, 621 (1992).

159. United States v. O'Brien, 391 U.S. 367 (1968); *see* Cantrell, *infra* note 161, at 73; *Green*, *supra* note 158, at 620; Foley, *supra* note 147, at 682–87.

160. Melissa K. Cantrell, *International Response to Dolly: Will Scientific Freedom Get Sheared*, 13 J.L. & HEALTH 69 (1998–1999); *see* IRA H. CARMEN, CLONING AND THE CONSTITUTION: AN INQUIRY INTO GOVERNMENTAL POLICYMAKING AND GENETIC EXPERIMENTATION 34 (The University of Wisconsin Press 1985); Robertson, *supra* note 46, at 39 (citing Cox v. Louisiana, 379 U.S. 559 (1965); Buckley v. Valeo, 424 U.S. 1 (1976).

161. Foley, *supra* note 147, at 683–84.

162. Remarkably, the category of *personal* speech is not recognized by the courts. Thus, the mundane speech of the common man, certainly the most fundamental and practical use of speech by human beings, has been left unrecognized, and so, unprotected by the United States Judiciary.

kind, a message through which the speaker seeks to reach and communicate with another or others.[163]

In contrast, while it is undisputed that scientific research should be entitled to broad protection, (albeit for entirely different reasons,) research consists of *actions,* actions that apply the scientist's thought, examination, and inquiry.[164] Scientific research consists of the *application*, not the communication of ideas. The actions of the scientist, in the form of research, contrast with his or her ideas.[165] Speech consists of the *expression* of ideas, whether by voice, gesture, pen, or image, created by a person in order to communicate with another or others.[166] Scientific research *might* be classifiable as the expression, or exploration of the validity, of ideas. But the purpose of that expression is *discovery*, not communication. Scientists, it is true, may invariably wish to communicate the consummating discoveries of their research to others. But the proposition that such purely physical action and engagement of the world constitutes a form of speech is simply invalid, advanced by its proponents, it seems, only in order to exploit the supreme legal protection afforded by the First Amendment. While no rational or caring soul can suppose to dispute the great virtue of science for its material improvement of the human condition, the cause of Truth in general, and science in particular, is not properly served by disingenuous definitions. Moreover, while some advocates of cloning may argue that prohibitions against the related research and procedures would inhibit

163. How might the observations entered into a diary be classified? For, at least apparently, the diarist writes for his or her own self, and not to any consciously intended recipient. Shall we suppose as a result that the *speech* of the diarist is unprotected by the First Amendment? It would seem the diarist's purpose does not include the intention to communicate the related ideas to another or others. And if the diarist affirmatively seeks to keep the diary private, the proposition becomes even stronger. However, diaries may be published posthumously as a historical, social, or familial record, a fact of which many serious diarists, certainly those more educated, may be aware. The fact that the diarist consciously creates a record might suggest eventual readers, absent express words or actions to the contrary. Moreover, many diarists, especially children, consciously indulge the conceit that the diary itself is a conscious, understanding recipient of the chronicler's confessions, a fact manifest in the common practice of commencing entries with the salutation, "Dear Diary," or alternately, addressing a fictional recipient by a given moniker. On the other hand, it may be equally argued that the maintenance of a diary provides a purely private, expedient means in which a person seeks to forge linguistic order on the chaos of his or her otherwise wordless experience of thought and feeling.

164. Foley, *supra* note 147, at 683.

165. *Id.*

166. *Id.* at 679.

scientific inquiry, there is no reason to suppose that all scientific goals or practices are proper, moral, or need be socially accepted.[167]

In *Spence v. Washington*,[168] the Supreme Court ruled that some conduct can be identified, at least legally, as *expressive*, and so entitled to First Amendment protection.[169] The first element of that test requires that the source of the conduct intend to "convey a particularized message."[170] Though scientists naturally hope to share the fruit of their scientific labors with colleagues, if not with society in general, and to communicate the nature of the work in the publication of papers and the delivery of lectures at conferences, the *research itself* does not constitute speech. The manipulation of elements and compounds by chemists, the exacting measurement of anatomy and physiology by biologists, the studied calibration of the stars by astronomers, the search for the existence of subatomic particles by physicists, none of these activities constitute *ideas* that occur in the mind; nor do they constitute the *communication* of such ideas to another or others in the speech of the spoken, written, graphic, or symbolic kind. Rather, each of the respective scientific endeavors constitute an *application* of the scientist's internal idea to the external, physical world of matter and energy.

Consider the diagram below:

idea	speech (spoken, written, graphic, symbolic)	action (manual, mechanical electronic, digital)	matter
	intent to communicate ideas or information to another or others capable of understanding	intent to alter or effect some aspect of the material world, through exertion	

167. Sophia Kolehmainen, *Human Cloning: Brave New Mistake*, 27 HOFSTRA L. REV. 557 (1999); *see* Declan Butler & Meredith Wadman, *Calls for Cloning Ban Sell Science Short*, 386 NATURE 8, 8 (1997) (discussing the concern of some scientists that legislating too quickly on cloning techniques may hinder innovative research).

168. 418 U.S. 405, 409–10 (1974) (holding that an inverted display of the American flag with a peace symbol affixed thereto is a form of communication protected by the First Amendment).

169. *Id. See* Foley, *supra* note 147, at 682.

170. *Spence*, 418 U.S. at 411; Foley, *supra* note 147, at 682.

Pure idea as it occurs in the human mind stands at one extreme of a greater spectrum; physical matter as it occurs outside the human mind stands at the other. When we refer to *speech*, we refer to the *expression* of the feelings and thoughts, whether spoken, written, graphic, or symbolic.[171] When we refer to *conduct*, we refer to *action* taken by a person *as a consequence of* ideas.

Of course, this distinction can be obliterated by proposing to define ideas in *physical* terms as primarily or merely neural activity of the brain.[172] In this way, one could suppose to blur the distinction between speech and action, defining speech as the residual effect of neural and oral physical activity.[173] As a concomitant of this proposition, the distinction can be

171. For example, communicative gestures such as sign language employed among the deaf, or a mourner's self-attirement in black garments as a means of communicating his or her condition of bereavement.

172. Such a proposition is not nearly as far-fetched as the uninitiated reader might suppose. Behavioral psychologists, for example, enamored of the objective measurement that distinguishes science from other disciplines of human inquiry, early endorsed the absurd, nihilist notion that, in the endeavor to change human conduct, the attributes of thought, feeling, and speech should be entirely disregarded. *See, e.g.*, the works of John B. Watson and B.F. Skinner. The great error of the behavioral psychologists, and indeed all who suppose to translate human or animal behavior in scientific terms, is their failure to recognize one fundamental fact: the universally determinable knowledge scientists acquire in their *objective* measurement of the world, as manifest in the disciplines of mathematics, physics, chemistry, and astronomy, exists not as a superior or supreme form of knowledge; to the contrary, it is an inferior form of knowledge, existing precisely to serve the greater purpose of individual sentient creatures in their several, necessarily unique, *subjective* engagement to the world. (This is one reason the mystery of human intelligence, of necessity, defies anything close to meaningful measurement.).

Doctors, insurance companies, and others in the health care industry have already committed a similar error. Despite the most grave and far-reaching social consequences, they essentially, and expediently, deny the historic, universal distinction drawn by human beings between the mind and body. Consider:

Throughout their lives, human beings suffer, as a natural and necessary condition of life, varying degrees of what may be called "psychic" pain. Such a condition is commonly described as "mental" or "emotional" suffering, and is invoked in such words as "unhappiness," "discontent," "distress," "anger," "grief," "depression," and "despair." Such pain may be understood metaphorically as a herald of sorts, conveying to the recipient the existence of some form of internal discord, which condition calls for the sufferer's recognition, appraisal, and resolution.

The psychic pain that men and women call "unhappiness," in any of its myriad forms, may thus be understood to occur within human beings as a signal, in the same way that physical pain in one's knee or one's shoulder occurs in response to the suffering of some precipitating trauma. That signal informs the recipient of the fact of an emergent condition requiring immediate attention. Indeed, the more intense the signal, the greater the danger to

the person should he or she fail to heed it. Thus, the athlete who suffers a sudden, acute tearing pain in his or her knee must urgently suspend the precipitating activity; failure to do so will result in an aggravation of the pain and injury. Indeed, if the victim fails to heed that urgent sensory warning, he or she may suffer the thorough destruction of the limb or organ's utility. The internal suffering identified as "psychic," "mental," or "emotional," invariably proceeds from some form of frustration—for example, the inaccessibility of food when hungry, poor performance on a school exam, the infliction of a harsh reproach by one's employer. It may occur suddenly, as with the unexpected death of a loved one, or it may transpire in a more subtle manner, as with the cumulative effect of a person's protracted action in compliance, not with his or her own internal needs, but rather, with the contrary desires of family, friends, co-workers, employers, or society. Such frustration may be benign, as when the quenching of one's thirst is delayed a few moments. Or it may take far more serious forms, as when a child is deprived of reliable affection, instruction, or security in his life, and as a result, his or her sovereign ability to harmoniously engage the world is proportionately impaired. In all but the most extreme cases, that is, in all cases in which a person's ability to function socially is not substantially impaired, relief from suffering may be found in careful reflection and reason, integration of the consequent understanding, and the determination of appropriate remedial action. In many cases, this process may take place naturally, with the passage of time. In other cases, a more conscious and deliberate approach may be required.

Over the past decade or so, with successful penetration of the subvisual molecular and atomic realm of human anatomy and physiology, scientists have succeeding in discovering a neurochemical analogue that corresponds to the emotions. As a result, with the introduction of certain chemicals into the body, scientists are now able to manipulate the neurochemical composition of a person's brain, and so, freely alter that person's emotions. With the successful commercial promotion of such drugs as Prozac, Xanax, and Elavil, the sale of anti-depressants and mood stabilizers has grown into a powerful multi-million dollar industry. Whether expressly by invoking "scientifically proven" truth, or implicitly by silent practice, physicians now, it seems routinely, diagnose human distress and despair as constituting something other than necessary conditions of life, properly resolved by a person through the sovereign employment of his or her reflection and reason. Rather, human emotion is commonly defined and understood in this, the dawn of the twenty-first century, as an essentially biological, neurochemical aberration, an essentially physiological condition that, when identified as the source of pain, is properly treated with the purported curative of prescribed chemicals.

Physicians, and society as a whole, commonly recognize the legitimacy of grief that arises in a person who suffers some sudden trauma, such as the death of a loved one. Similarly, they usually recognize that the natural resolution of that condition, in most cases, may be achieved with the mysterious but naturally therapeutic effect of time's passage. Strangely, however, they rarely recognize the grief that results from the cumulative effect of some protracted trauma to the mind or soul, such as may occur in a more subtle manner with the eventual failure of a more prolonged endeavor. The resulting "melancholy" or "depression" is rather mis-defined in biochemical, rather than social, spiritual, or philosophical terms.

When a person suffers a failure of some protracted enterprise, such as may occur in work, school, or marriage, the aspects of the world that formerly served to divert and engage may become strangely muted and hollow. An amnesia of sorts may overcome the

person so that he or she can barely, if at all, recall ever having found any type of delight or uplift in the world. He or she may suffer a relentless despair, perhaps over past errors, whether real, exaggerated or imagined, or alternately, over some form of misfortune recalled or envisioned. He or she may suffer as well a perfect hopelessness towards any imagined course of action in the future that will bring desired but elusive relief. Unreason usurps the throne of reason in the person's attempt to conceive of ideals and goals towards which laboring is deemed worthy, as the sufferer commonly presumes an unfounded sense of omniscience and clairvoyance—omniscience in his or her certain conclusion that there is no good to be known in the world, and clairvoyance in his or her identical presumption concerning the perfect deficiency of goodness to be ever known again in the future. In most cases, a person can redress this tyranny of emotion over reason by withdrawal from those engagements that, previously unacknowledged, serve to oppress him or her, as well as tenaciously searching out affirmative, recreational engagements that will serve to please, restore, and uplift his or her mind. For if there is a neurochemical analogue, or biological seat to the emotions, then any putative imbalance caused by misfortunate events is surely redressable through fortunate ones. Simply put, if adverse events upset the balance of the body's emotional chemistry, then uplifting events should, in most cases, be able to restore it. The problem, indeed, the challenge, a person faces in seeking to overcome melancholy is the immobilizing inertia and delusive pessimism that so often accompany that condition, to search out and find those pleasing and restorative engagements that, in such a state, are so elusive. The word "recreation" is formed from the verb "to recreate." To recreate is "to restore to a good or normal physical condition from a state of weakness or exhaustion." OXFORD ENGLISH DICTIONARY 372 (2d ed. 1989). And it is ultimately, and precisely a want of that recreative engagement to the world, in sufficiently bounteous degree, that may prevent a person from overcoming the paralyzing melancholy he or she may suffer.

Of course, the mortality of human being has its limits. While the body possesses extraordinary resources for self-healing, an extreme physical trauma may require external intervention. Similarly, an extreme mental, spiritual, or emotional trauma can be so acute that a person's ability to function becomes impaired, or worse, the victim may find him or herself driven to self-destruction in the attempt to overcome unbearable psychic pain. In such cases, of course, medical intervention is redemptive. Just as the physician must at times concede the mysteriously curative power of non-physical agents such as a patient's positive outlook, or the unknown therapeutic agent animated by the so-called placebo effect, so too, the soul must at times rely upon physical intervention as the requisite means of survival. However, in conventional medical understanding and practice, one finds an institutional confusion of cause and effect, or translated into more apt metaphorical terms, a confusion of disease and symptom. The intense experience of discontent and frustration that may be described as distress, depression, or despair, as well as the physical, bio-chemical analogue thereto, do not constitute *the cause* of a person's pain; they constitute the pain itself. They constitute *the effect* that proceeds from an undiscerned, private (but perfectly accessible) psychic cause; in most cases, that cause is the failure to acknowledge and withdraw from oppressive engagement to the world, and concomitantly, to seek out more uplifting engagement. By supposing to prescribe medication to redress the corresponding neurochemical imbalance, doctors, (again, metaphorically speaking,) mistakenly treat the symptom rather than the disease. Where a person's pain is acute, where he or she is so overwhelmed that he or she cannot function, where he or she is self-destructive or suicidal, then resorting to chemical

treatment is, of course, justified. But even then, the conscious, greater goal, too often absent in contemporary practice, should be to prudently wean the patient off the medication, while helping him to re-organize the order of his life so he or she can recover his or her sovereignty, and exploit the natural and proper means of his or her restoration.

With the great, looming authorities of science, advertising, and social convention conjoined in purpose, the common man of the twenty-first century, afflicted by acute unhappiness, is just as likely as not, to conclude that his affliction proceeds, not from the discordant order of the purposes and aims of his life, but from an anatomic, neurochemical imbalance in need of medical treatment. But it is precisely the pain of sadness, of frustration, of grief, that provide the very foundation for the penultimate two questions of life: 1) What is meaningful? and 2) What is moral? Or put another way, ever vulnerable to finding him or herself ultimately oppressed by action undertaken in conformity with convention, habit, or impulse, a person must ever ask himself, 1) What must I do today to successfully sustain or improve my life? And 2) Does the prospective course of action raise any question of moral injury to others, or to myself? Despite the radical technological transformation of human society in the twentieth century, these questions abide, remaining undiminished in their primacy. In contrast, to suppose to eliminate a person's psychic pain chemically is thus to block his or her access to the very means of his or her human growth, of his or her human being, now for the forging of faith in the fire of abiding despair, now for creative discovery of new realms, or an alternate path of uplifting engagement. Ironically, it is precisely because of the potential use of narcotics for such a socially subversive purpose that legislators rigidly require medical prescription for some drugs, and absolutely outlaw the acquisition, possession, or use of others. Moreover, neurochemical treatment leaves the problems that introduced the original condition of discontent unresolved, leaving that person's mind, soul, or spirit, in a static, and so, ultimately frustrated condition.

As with the false proposition that scientific research constitutes a form of speech, the proposition that a chemical imbalance in the brain is the cause, rather than the effect of human unhappiness, constitutes a principle expediently fashioned out of self-interest: 1) The pharmaceutical industry enjoys, and stands to continue to enjoy, monumental profits with society's adoption of the exotic notion that unhappiness is properly defined as the want of some form of medication. 2) Insurance companies endorse the proposition, false though it is, for it eliminates the enormous cost they would otherwise have to incur if they were required to provide the alternate treatment, (woefully flawed though it often is,) of more mystically-based forms of psychological consultation. 3) Physicians are served by this fiction simply because it is so expedient; they need not spend time listening and assigning significance to patients' complaints when the routine, momentary dispensation of prescriptions provide instant, even if ultimately, only illusory resolution. And it is precisely the want of such significance that precipitates the suffering that impels patients to seek medical resolution or treatment for what is essentially a nonmedical condition. (Indeed, the ineffably radical transformation of society over the last century, wrought by television, computers, motion pictures, radio and recorded sound, in diminishing and displacing a person's traditional engagements to family, friends, nature, and religion, has left the individual human soul thoroughly dislocated. As electronic, anonymous engagement of that which is remote has displaced the natural, familiar engagement of that which is at hand, the significance so deeply and vitally coveted by human beings, at one time naturally accessible, has all but vanished.) In a day and age in which physicians seem almost universally to aspire to schedule as many patients in a given hour as possible, any

similarly denied by supposing to define matter as sensory ideas, received, classified, and suffered within the mind. However, if there is to be a basis of agreement among human beings on any subject, a starting point must be established with certain primary principles, of which idea and matter, as well as speech and conduct, naturally, and to be sure, universally, are observed by human beings in the practical exigencies of daily life.

While some legal scholars may conclude that the First Amendment's freedom of speech protects *scientific speech*,[174] the Supreme Court has ruled that freedom of speech, while protected by the Constitution, is not absolute.[175] And just as the definition of freedom is properly circumscribed, so equally the definition of speech should not be allowed to suffer the dilution, diminution, or distortion of indiscriminate or inappropriate employment.

CONCLUSION

Some strenuously advocate cloning based upon the Constitution's protection of individual right of privacy and reproductive freedom. Others peremptorily oppose asexual reproduction because it is neither historically rooted nor necessary to the Anglo-American tradition of ordered liberty. Clearly, the fear of the unknown has driven much of the opposition to reproductive cloning as have legitimate fears and skepticism about scientific and medical abuse. Hence, should scientists develop the ability to clone human beings in a manner that is reliably safe for both mother and child, no

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course of action which reduces the time they must spend with patients will surely be welcome. In short, there is simply no material disincentive to deter those in the health care industry—pharmaceutical companies, insurance companies, and physicians, from endorsing and promoting a neurochemical definition of human emotion, and so, human being.

174. Cantrell, *supra* note 160, at 73; *see* CARMEN, *supra* note 160, at 35.

175. Cantrell, *supra* note 160, at 73; *see* CARMEN, *supra* note 160, at 36; *see also* Abrams v. United States, 250 U.S. 616, 627 (1919) (Holmes, J., dissenting) ("I do not doubt for a moment that by the same reasoning that would justify punishing persuasion to murder, the United States constitutionally may punish speech that produces or is intended to produce a clear and imminent danger that it will bring about forthwith certain substantive evils that the United States constitutionally may seek to prevent."); Whitney v. California, 274 U.S. 357, 373 (1927) (Brandeis, J., concurring) ("But, although the rights of free speech and assembly are fundamental, they are not in their nature absolute."); Near v. Minnesota, 283 U.S. 697, 716 (1931) ("the protection [of free speech] even as to previous restraint is not absolutely unlimited.").

constitutional basis seems to exist for denying infertile couples access to such technology.[176]

However, the ability to clone human beings has not yet been achieved. While politicians and philosophers debate how many clones can dance on the head of the proverbial pin, the immediate, practical considerations render the matter peripheral rather than primary in importance. A more practical issue that calls for immediate resolution concerns the disputed domain where research into reproductive human cloning takes place—the scientific laboratory. While science has radically transformed society through such revolutionary inventions as the airplane, the motion picture, antibiotics, and the computer, science has also amplified humankind's destructiveness by providing society with the means to construct hydrogen, atomic, and nuclear bombs, as well as the means to irrevocably pollute the land, sea, and air. Moreover, the burgeoning ideals of eugenics have already wrought

176. It may be a mistake to speak of a constitutional right to reproduce through cloning, just as it may be equally inaccurate to speak of a constitutional right to vote, to marry, or to raise and educate one's children. One speaks more accurately, perhaps, by asking whether the principles of the Constitution protect or proscribe the challenged speech or conduct. The Constitution's enumerated rights are finite, and relatively few in number. The application, of these rights, of course, are inestimably broad and diverse in scope. Rather, the more proper inquiry might be whether the Constitution, in some provision or aspect, prohibits the disputed aim or interest.

The transcendent authority of the Constitution, and the greater cause of Truth, are better served by discussion of citizen's rights, not in terms of affirmative or express constitutional articulation, which enumeration, of necessity, is quite limited. Rather, we more wisely speak in terms of whether or not citizen's interests are, by the principals of the Constitution, protected or constrained. That is, does any principle of the Constitution protect or prohibit a man or woman from engaging in the challenged activity?

All legitimate and just rights are bestowed upon men and women, not by human edict or pronouncement. Rather, they are endowed by Nature, and acquire entitlement to protection by natural law; the Constitution merely provides the political and legal mechanism by which men and women may protect themselves from insidious governmental encroachment. To defiantly demand, insist upon, or proclaim one's interests because, one asserts, they are not enumerated but no less sacrosanct constitutional rights, threatens to mistake both the condition of life bestowed by Nature, and human aptitudes endowed by Providence, as mortal in origin or justification. It is a person's right to speak his or her mind, to seek redress from those who govern, to marry, and to reproduce, not because the Constitution gives a person these or any other rights. For surely these are not enumerated anywhere in that document, transcendent though its contents may be. Rather a person is entitled to protection of these rights because the attributes of a person's mind, and the innocence of his or her purpose, are sustained by a source greater than mortal men, which men, politically, commercially, religiously, and interpersonally, are wont to enslave and oppress their brethren. The Constitution embodies a finite number of rights, but the principles determinable from those rights are not similarly bound by a finitude in application.

catastrophic results: the infliction of suffering in the cruelest, most incomprehensible terms by Nazi Germany during World War II,[177] thus proving that those who fear the abuse of such discoveries are not rightly dismissed as hysterical Cassandras. Because of the consequent apprehension, and in particular, the immediate fear of the casual misuse of fetal tissue and embryos, governmental regulation of human cloning research constitutes a proper, and ultimately, necessary step in the advance of science.

The most immediate danger in the attempt to clone a human being would be to the fetus.[178] Indeed, the National Bioethics Advisory Commission observed that presently, using this technique to create children would pose significant dangers to developing children and the fetus.[179] Such statements may appear to some as little more than governmental cant, but even Ian Wilmut, the scientist famed for cloning the first sheep, has condemned human cloning attempts as "criminally irresponsible," observing that ninety-eight percent of embryos fail to survive gestation or birth.[180] Wilmut has further expressed certainty that cloned human children would be born with abnormalities, and be predisposed to die prematurely.[181] Indeed, so serious are the fears, and so legitimate are the dangers, that the Commission concluded unequivocally that human cloning should not presently be attempted.[182] Moreover, a series of bills have been proposed by Congress in the attempt to prohibit human cloning.[183] The Commission has expressed concerns about physical safety, about eugenics, as well as about the individuality, autonomy, objectification, and kinship of the resulting child.[184] Legislation proposed in Congress has followed the specific regulations of the National Bioethics Advisory Commission.[185] The Commission recommended a federally legislated prohibition on any attempt "whether in a research or a clinical setting, to create a child through somatic cell nuclear transfer cloning."[186] However, in anticipation of imminent advances in existing research, the Commission qualified its ban with the suggestion that such legislation include a sunset clause to ensure that Congress will review

177. Pelias, *supra* note 66, at 843.

178. *Cloning Human Beings*, *supra* note 2.

179. *Id.*

180. Gibbs, *supra* note 7, at 4.

181. *Id.*

182. *Cloning Human Beings*, *supra* note 2, at 3.

183. Kassierer, *supra* note 14; *Should Cloning Be Bannede at* http://www.reason.com/biclone/html (last updated Oct. 2001).

184. Robertson, *supra* note 126.

185. *Cloning Human Beings*, *supra* note 2, at iv.

186. *Id.*

the issue after a specified period in order to determine if the prohibition should continue.[187]

The reproductive technology of cloning, like all scientific processes that prescribe human ingestion, implantation, and transplantation, requires governmental regulation as the only means available to protect the powerless and unknowing. Such regulation will serve not only the prospective parents of a cloned child, and the cloned child him or herself from the moment of conception; it will also protect society as a whole by upholding the sanctity of human life. Governmental regulation of human cloning will serve to ensure the health of prospective children, the safety and well-being of the mother, and ensure the propriety of genetic diagnosis and therapy.

Later in this century, the ability to reproduce asexually may be regarded as an utterly pedestrian fact of life much as the instant generation regards the ubiquitous presence of mobile telephones and portable computers as unremarkable. It is a potential that nevertheless succeeds in disorienting the minds of most men and women in the current day, who never supposed to imagine a means of human procreation other than sexual reproduction. While politically, socially, and legally, America's commitment to human freedom must check any hint that the government might suppose to exploit its power to proscribe a safe and reliable, albeit scientific means to reproduce, in contrast, the scientific and medical procedures themselves, precisely because unchecked, they may be abused with potentially disastrous effects, must be subject to governmental regulation. It is only with prudent and proper governmental regulation that society will be able to properly exploit cloning to achieve such heretofore unimaginable visionary ideals such as the finding of cures for disabling and horrific diseases, and defeating the continued hereditary transmission of defective genes.

187. *Id.*